

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WENZHOU XIN XIN SANITARY WARE CO., LTD.,
Petitioner,

v.

DELTA FAUCET COMPANY,
Patent Owner.

IPR2023-01332
Patent 11,473,277 B2

Before DONNA M. PRAISS, JEFFREY W. ABRAHAM, and
JANE E. INGLESE, *Administrative Patent Judges*.

INGLESE, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Overview

Wenzhou Xin Xin Sanitary Ware Co., Ltd. (“the Petitioner”) filed a Petition (Paper 1, “Pet.”) for *inter partes* review of claims 1–7, 10–17, 20, 21, 23, and 24 (the “challenged claims”) of U.S. Patent No. 11,473,277 B2 (Ex. 1001, “the ’277 patent”). Delta Faucet Company (“the Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim Resp.”).

We have authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2022) (“The Board institutes the trial on behalf of the Director.”). *Inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Upon consideration of the information presented in the Petition and Preliminary Response, we determine that the Petitioner has not provided sufficient information to demonstrate a reasonable likelihood that it would prevail in establishing the unpatentability of at least one challenged claim. We therefore deny institution of *inter partes* review.

B. Real Parties-in-Interest

The Petitioner identifies itself, Wenzhou Xin Xin Sanitary Ware Co., Ltd., as the real party-in-interest. Pet. 73. The Patent Owner identifies itself, Delta Faucet Company, as the real party-in-interest. Paper 6, 2. The Patent Owner states that “Delta Faucet Company is a wholly owned

subsidiary of Masco Corporation of Indiana” and that “Masco Corporation, a publicly traded company, owns 90% of Masco Corporation of Indiana.” *Id.*

C. Related Matters

The parties identify the following proceeding involving the ’277 patent: *Wenzhou Xin Xin Sanitary Ware Co., Ltd. v. Delta Faucet Company*, No. 1:23-cv-2057 (S.D. Ind.) (transferred from No. 2:23-cv-2038 (D.N.J.)). Pet. 73; Paper 8, 2. The Patent Owner also identifies *Delta Faucet Company v. Wenzhou Xin Xin Sanitary Ware Co., Ltd.*, No. 1:23-cv-1633 (S.D. Ind.) as a related proceeding. Paper 8, 2.

II. BACKGROUND

A. The ’277 Patent (Ex. 1001)

The ’277 patent¹ relates to a “vessel rinsing apparatus” for cleaning the interior of glasses, cups, and other small fluid vessels and containers. Ex. 1001, 1:14–20.

¹ The Patent Owner indicates that “U.S. Application No. 18/233,846 filed 08/14/2023, is a continuation of U.S. Application No. 17/890,526 filed August 18, 2022, now U.S. Patent No. 11,725,369, which application is a continuation of U.S. Application No. 17/167,467 filed 02/04/2021, now U.S. Patent No. 11,473,277.” Paper 6, 2.

Figure 1 of the '277 patent is reproduced below.

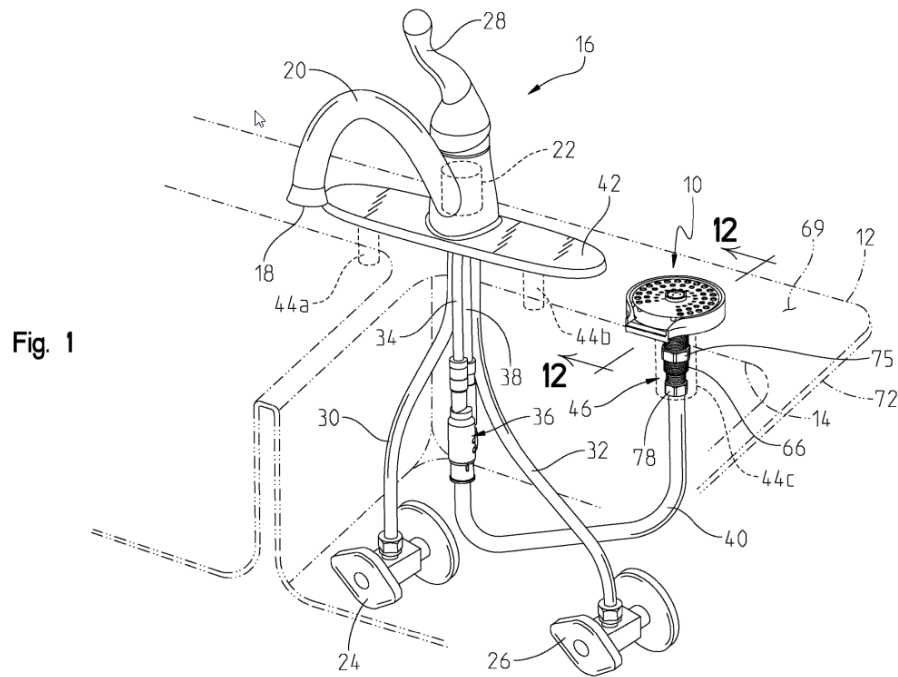
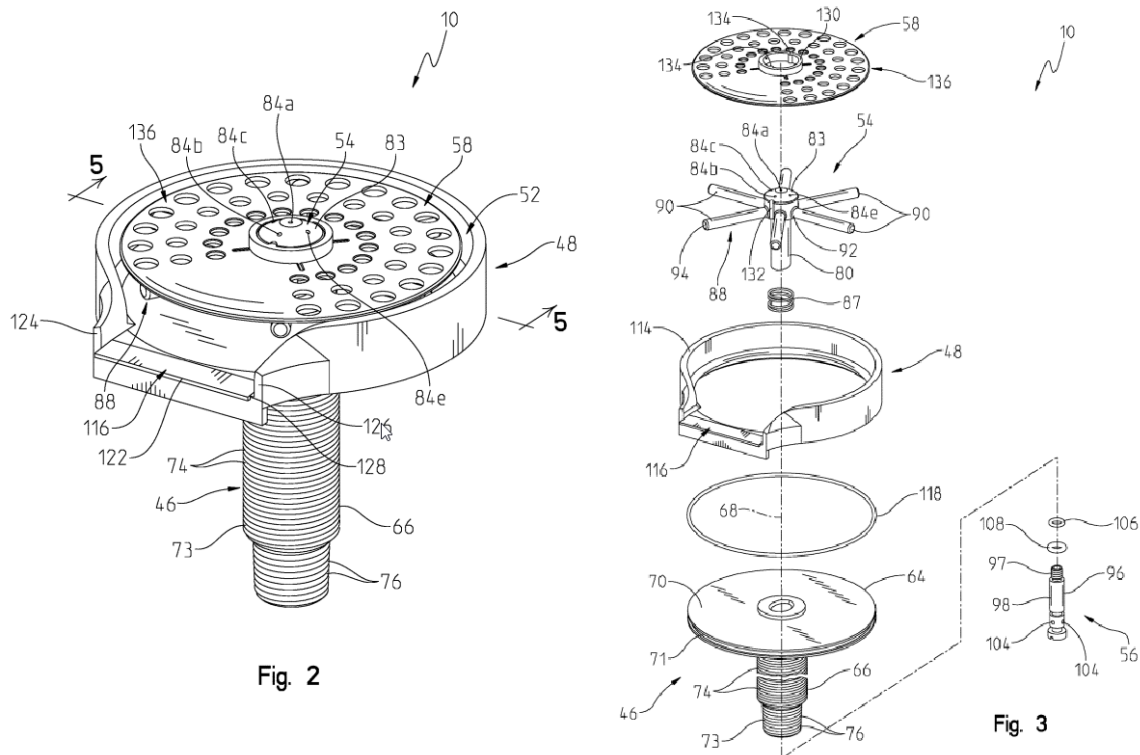


Figure 1 shows vessel rinsing apparatus 10 mounted to sink deck 12 and fluidly coupled to faucet 16. *Id.* at 2:42–44, 3:28–33.

Figures 2 and 3 of the '277 patent are reproduced below.



1–3.

Escutcheon 48 is supported by mounting base 46 and includes upwardly extending wall 114 and drain channel 116 extending through upwardly extending wall 114. *Id.* at 5:40–42, Figs. 2 and 3. Upper plate 64 of mounting base 46 and upwardly extending wall 114 of escutcheon 48 define drain bowl 52. *Id.* at 4:6–9, 5:40–48, Fig. 2. Drain channel 116 is configured to provide fluid communication between drain bowl 52 and sink basin 14 supported by sink deck 12. *Id.* at 5:43–46, Fig. 1.

Fluid discharge member 54 includes central body 80 that defines fluid passageway 82 and has sprayface 83, which supports a plurality of nozzles 84 in fluid communication with fluid passageway 82. *Id.* at 4:39–43, Figs. 5 and 6. Trigger 88 extends outwardly from central body 80 and includes a plurality of radially outwardly extending arms or posts 90. *Id.* at 5:11–13, Figs. 2 and 3. Fluid discharge member 54 is configured to move along longitudinal axis 68 between a raised (rest) position and a lowered (active) position, and valve member 56 is configured to move with trigger 88 of fluid discharge member 54 to control water flow through central body 80 to nozzles 84. *Id.* at 4:67–5:3, 5:16–21, Figs. 5 and 6.

Trigger plate 58 is secured to fluid discharge member 54 and is configured to be engaged by vessel 60 (e.g., a cup, glass, or other container), which causes trigger 88 to move downward and actuate valve member 56, causing water to flow through central body 80 and nozzles 84 of fluid discharge member 54 into the interior of vessel 60. *Id.* at 4:11–15, 5:16–39, 5:65–6:1, Figs. 5 and 6.

C. Challenged Claims

The Petitioner challenges claims 1–7, 10–17, 20, 21, 23, and 24 of the '277 patent. Pet. 5. Claims 1, 11, and 20 are independent, claims 2–7 and 10 depend directly or indirectly from claim 1, claims 12–17 depend directly or indirectly from claim 11, and claims 21, 23, and 24 depend directly or indirectly from claim 20. Ex. 1001, 6:64–9:16.

Independent claims 1, 11, and 20 are representative of the claimed subject matter, and read as follows:

1. A vessel rinsing apparatus comprising:
 - a mounting member extending along a longitudinal axis, the mounting member configured to extend th[r]ough a mounting aperture formed within a mounting deck;
 - a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;
 - a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles in response to movement of the trigger; and
 - a drain bowl operably coupled to the mounting member, the drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by the mounting deck.
11. A vessel rinsing apparatus comprising:
 - a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall,

- the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck;
- a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck;
- a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member;
- a valve member operably coupled to the fluid discharge member and configured to control water flow through the central body to the plurality of nozzles; and
- wherein the drain channel slopes away from the fluid discharge member and the drain bowl to facilitate water drainage into the sink basin.

20. A fluid delivery device comprising:

- a vessel rinsing apparatus including:
 - a drain bowl including a lower wall and an upwardly extending wall, and a drain channel extending through the upwardly extending wall, the drain channel configured to receive water from the drain bowl and discharge water above and into a sink basin supported by a mounting deck;
 - a mounting member operably coupled to the drain bowl, the mounting member configured to couple the drain bowl to the mounting deck;
 - a fluid discharge member including a central body supporting a plurality of nozzles and a trigger, the central body being movable relative to the mounting member; and
 - a valve member operably coupled to the fluid discharge member and configured to control water flow through

the central body to the plurality of nozzles; and
a faucet including:
a delivery spout having a water outlet;
a valve fluidly coupled to the delivery spout, the valve
configured to control water flow to the water
outlet; and
wherein the fluid discharge member of the vessel rinsing
apparatus is in selective fluid communication with the
valve of the faucet.

Ex. 1001, 6:64–7:14, 7:51–8:3, 8:35–59.

D. Asserted Grounds of Unpatentability

The Petitioner asserts that the challenged claims are unpatentable on
the following grounds (Pet. 5):

Ground	Challenged Claim(s)	35 U.S.C. §	Reference(s)
1	1–5, 10–13, 15	103	Van Der Linden, ² Shen Wei ³
2	1–7, 10–17, 20, 21, 23, 24	103	Thomas, ⁴ Van Der Linden
3	1, 2, 5–7, 10–14, 16, 17, 20, 21, 23, 24	103	Thomas, Boursier, ⁵ Hotaling ⁶

² US 2008/0142095 A1, published June 19, 2008 (Ex. 1006, “Van Der Linden”).

³ CN 203281567 U, published November 13, 2013 (Ex. 1007, “Shen Wei”).

⁴ US 2011/0061754 A1, published March 17, 2011 (Ex. 1008, “Thomas”).

⁵ FR 2606622 A1, published May 20, 1988 (Ex. 1009, “Boursier”).

⁶ US 2012/0204342 A1, published August 16, 2012 (Ex. 1010, “Hotaling”).

The Petition is supported by the Declaration of J. Chris Cook (Ex. 1005).

III. ANALYSIS

A. Level of Ordinary Skill in the Art

The Petitioner asserts that a person of ordinary skill in the art “would have had a minimum of a bachelor’s degree in mechanical engineering or its equivalent and two years of experience in mechanical engineering with some experience in mechanical design.” Pet. 6. The Petitioner further asserts that “[i]n lieu of a degree, a POSITA could be one whose equivalent accumulated knowledge and experience in the field of mechanical engineering and specifically mechanical design makes him or her a POSITA,” and that “[a]dditional graduate-level education could substitute for professional experience, or significant experience in the field could substitute for formal education.” *Id.* The Patent Owner does not provide a definition of a person of ordinary skill in the art. *See generally* Prelim. Resp.

We find, at this stage, that the asserted prior art itself is sufficient to demonstrate the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (prior art itself can reflect the appropriate level of ordinary skill in the art). To the extent a more precise definition is required, we apply the Petitioner’s unopposed definition for purposes of determining whether to institute review, because it is consistent, on this record, with the disclosures of the asserted prior art references.

B. Claim Interpretation

We interpret claims “using the same claim construction standard that would be used to construe the claims in a civil action held under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b). Under this standard, claim terms generally are given their plain and ordinary meaning as would have been understood by the ordinarily skilled artisan at the time of the invention when read in the context of the specification and prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). We construe terms in controversy only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

The Petitioner states that:

In an IPR, claim terms are given their “broadest reasonable construction in light of the specification of the patent in which it appears.” See 37 C.F.R. § 42.100(b). Under this broadest reasonable construction standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. See *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

The Petitioner “proposes that all claim terms be given their plain and ordinary meaning.” Pet. 6.

The Patent Owner argues that the Petitioner’s use of “the [broadest reasonable interpretation] standard rather than the *Phillips* standard in identifying its claim construction position” is a “fatal error,” and, as a result,

the Board should deny institution. Prelim. Resp. 1, 9. The Patent Owner argues that the Board should also deny institution because:

in a declaratory judgment action brought by the Petitioner concerning the ‘277 Patent, the Petitioner identified its claim construction position for each of independent Claims 1, 11, and 20, wherein the Petitioner stated that multiple limitations in each of the respective independent claims are subject to a means-plus-function treatment under 35 U.S.C. § 112(f).

Id. at 10–11 (citing Ex. 2002 ¶¶ 32–34). The Patent Owner argues that “[t]he Board has previously denied institution where a petitioner failed to apply the claim construction which it adopted at the district court and should do so again here.” *Id.* at 10 (citing *OrthoPediatrics Corp. v. K2M, Inc.*, IPR20108-01548, Paper 9 at 10–12 (PTAB Mar. 1, 2019)).

Taking into consideration the arguments and information the Petitioner and the Patent Owner present, we determine that none of the claim terms requires express construction for purposes of deciding whether to institute review. As a consequence, we need not decide whether the Petitioner’s reliance on an incorrect claim construction standard in this proceeding constitutes grounds for denying institution. Nor is it necessary for us to decide here whether it was improper for the Petitioner to propose different constructions in this proceeding and in the declaratory judgment action filed after the Petition.

C. Principles of Law

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed.

Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied upon).

When an obviousness challenge asserts a combination of identified prior art, “it [is] important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The relevant inquiry is “whether ‘a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention.’” *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (internal citations omitted) (emphasis added); *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011) (“Obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination.”).

D. The Asserted Prior Art

The Petitioner’s asserted grounds of unpatentability are set forth above, and rely on the following prior art references. Pet. 5.

1. Van Der Linden (Ex. 1006)

Van Der Linden discloses washing devices 21, 78 for washing the insides of glasses. Ex. 1006 ¶¶ 5, 30, 31, 39, Figs. 1 and 5.

Figures 1 and 5 of Van Der Linden are reproduced below.

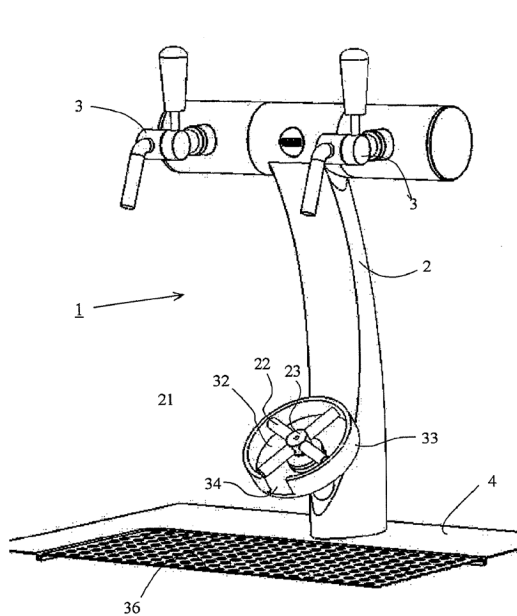


Fig. 1

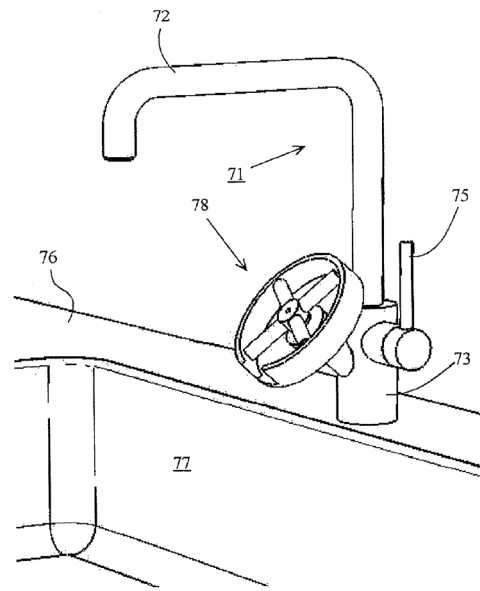


Fig. 5

Figure 1 is a perspective view of draft tower 1 including washing device 21. *Id.* ¶¶ 25, 31–35. Figure 5 is a perspective view of faucet 71 including washing device 78. *Id.* ¶¶ 29, 39.

As shown in Figure 1, mounting washing device 21 to column 2 of draft tower 1 allows a common channel to be used for a tap line of draft tower 1 and for supply line 28 of washing device 21, which reduces the number of bores in worktop 4 required to mount washing device 21. *Id.* ¶¶ 17, 31, Fig. 1. Similarly, as shown in Figure 5, washing device 78 is mounted to base 73 of kitchen faucet 71, which permits a common channel to be used for tap 72 of kitchen faucet 71 and for a supply line of washing device 78; as a result, the number of bores in kitchen worktop 76 required to mount washing device 78 are reduced. *Id.* ¶¶ 17, 39, Fig. 5.

Figure 2 of Van Der Linden is reproduced below.

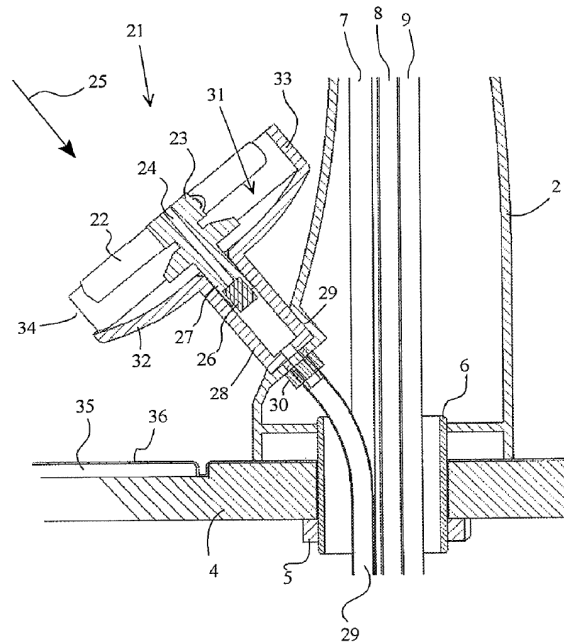


Fig. 2

Figure 2 is a vertical longitudinal sectional view of a lower part of draft column 2 that forms part of draft tower 1 illustrated in Figure 1. *Id.* ¶¶ 26, 31.

As shown in Figure 2, washing device 21 includes cross-shaped abutment member 22 having spray nozzle body 23 connected to its center. *Id.* ¶ 31. Spray nozzle body 23 includes internal spray channel 24, which opens into a spray nozzle, and valve 26 is disposed at the opposite cylindrical end 27 of spray channel 24. *Id.* Cylindrical end 27 extends within supply line 28, which provides washing liquid to spray channel 24 and also forms a base for washing device 21. *Id.* ¶¶ 31, 32. The lower end of supply line 28 is disposed in recess 29 present in the wall of column 2. *Id.* ¶ 32.

When the open end of a glass applies pressure against abutment member 22, valve 26 opens and washing liquid is sprayed through spray channel 24 into the glass. *Id.* ¶ 31. The abutment surface defined by abutment member 22 is positioned at “an angle of about 45 degrees with the vertical and is thus directed towards the user . . . which is advantageous for ergonomic reasons.” *Id.* ¶ 32.

Washing device 21 also includes substantially cup-shaped container 31 that joins the upper end of base (supply line) 28 and is formed of upright circular wall 33 and bottom 32. *Id.* ¶ 33. Circular wall 33 is interrupted at its lowermost point by outflow opening 34, which may be located in draft tower 1 above recessed part 35 in worktop 4 where drip tray 36 is disposed. *Id.* Alternatively, in the case of kitchen faucet-mounted washing device 78, outflow opening 79 may be located above sink 77 of kitchen worktop 76. *Id.* ¶ 39, Fig. 5. When washing devices 21, 78 are in use, wash water flows from a glass being washed into cup-shaped container 31 and out of cup-shaped container 31 via outlet opening 34 or 79 into drip tray 36 or sink 77, respectively. *Id.* ¶¶ 35, 39, Figs. 2 and 5.

2. *Shen Wei (Ex. 1007)* ¶ 33.

Shen Wei discloses a cup-washing machine, illustrated in Figures 1 and 6, reproduced below. Ex. 1007 ¶¶ 12, 17.

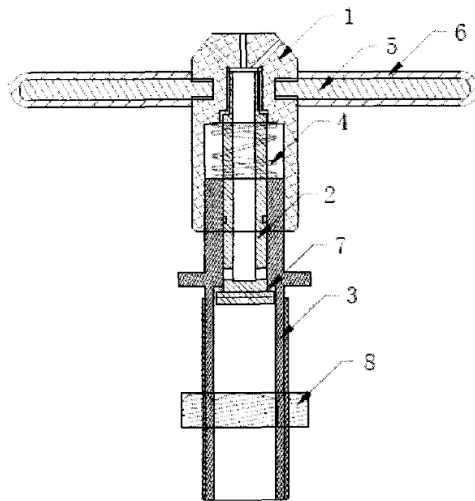


Figure 1

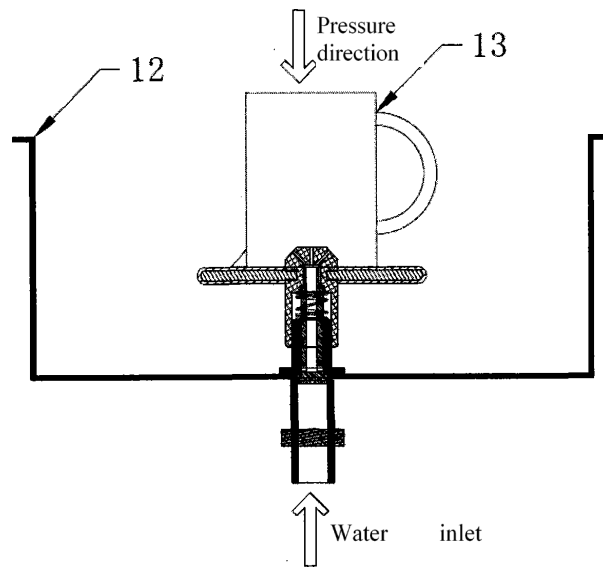


Figure 6

Figure 1 shows a cross-sectional view of a cup-washing machine including nozzle 1 having multiple orifices 9 (not shown), valve spool 2, body 3, spring 4, bracket 5, protective sleeve 6, sealing ring 7, and fastening nut 8. *Id.* ¶¶ 12, 20.

Figure 6 shows the cup washing machine fixed on sink 12, and shows container 13 pressing down on bracket 5, which compresses spring 4, causing valve spool 2 to move downward. *Id.* ¶¶ 17, 20. The downward movement of valve spool 2 causes water to pass from body 3 into inlet holes at the bottom of valve spool 2, enter nozzle 1, and spray through orifices 9 on nozzle 1. *Id.*

3. Thomas (Ex. 1008)

Thomas discloses sink assembly 2 including mounting deck 4 supporting faucet assembly 10 above sink basin 6. Ex. 1008 ¶ 31, Figs. 1 and 2.

Thomas's Figures 1 and 2 are reproduced below.

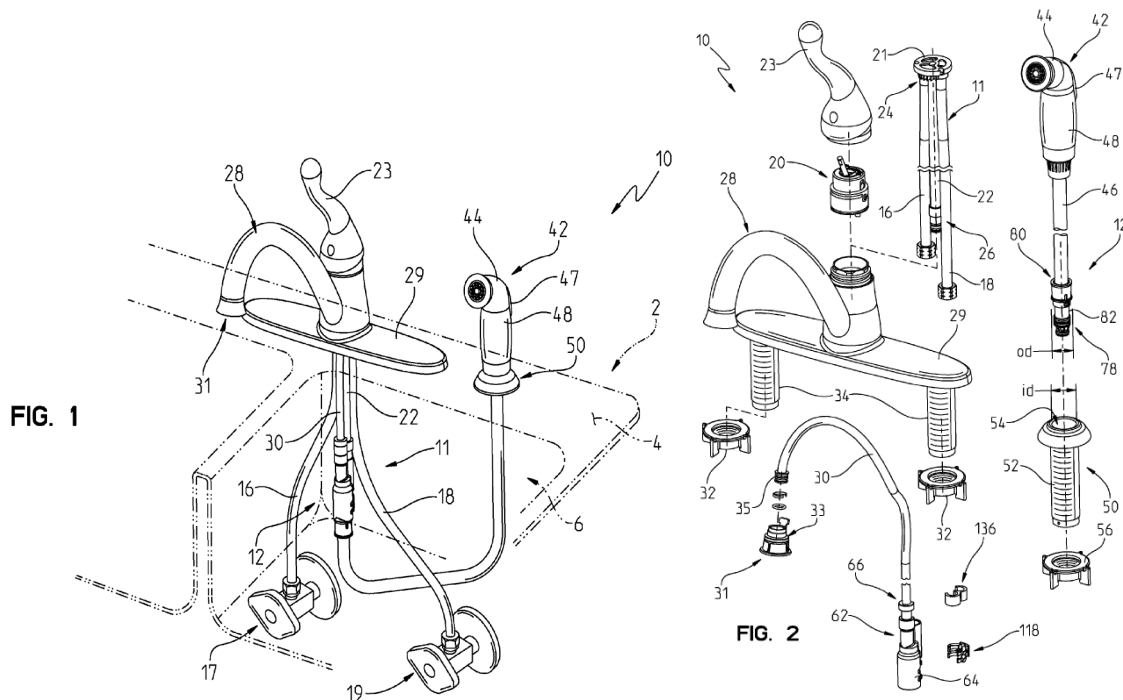


Figure 1 is a perspective view of faucet assembly 10. *Id.* ¶¶ 11, 31. Figure 2 is an exploded perspective view of faucet assembly 10 of figure 1. *Id.* ¶¶ 12, 31.

Faucet assembly 10 includes diverter assembly 12 and an auxiliary fluid dispenser in the form of sprayer assembly 42. *Id.* ¶¶ 31, 33. Sprayer assembly 42 includes handheld sprayer 44 having trigger 47 and body 48 removably supported by mounting base 50, which includes mounting shank or post 52 that receives sprayer outlet tube 46. *Id.* ¶ 33. Nut 56 engages mounting post 52 and secures mounting base 50 to mounting deck 4. *Id.*

Diverter assembly 12 includes diverter valve 78 having valve member 90 secured to inlet end 80 of sprayer tube 46. *Id.* ¶ 40, Figs. 4 and 5. When spray trigger 47 is actuated, water flows through sprayer tube 46 to handheld

sprayer 44. *Id.* ¶ 45.

4. *Boursier (Ex. 1009)*

Boursier discloses a glass rinser assembly that includes “a small tray that supports the entire assembly and is itself fastened to a wall or other partition by means of two screws.” Ex. 1009, 1.

Boursier’s Figures A and B are reproduced below.

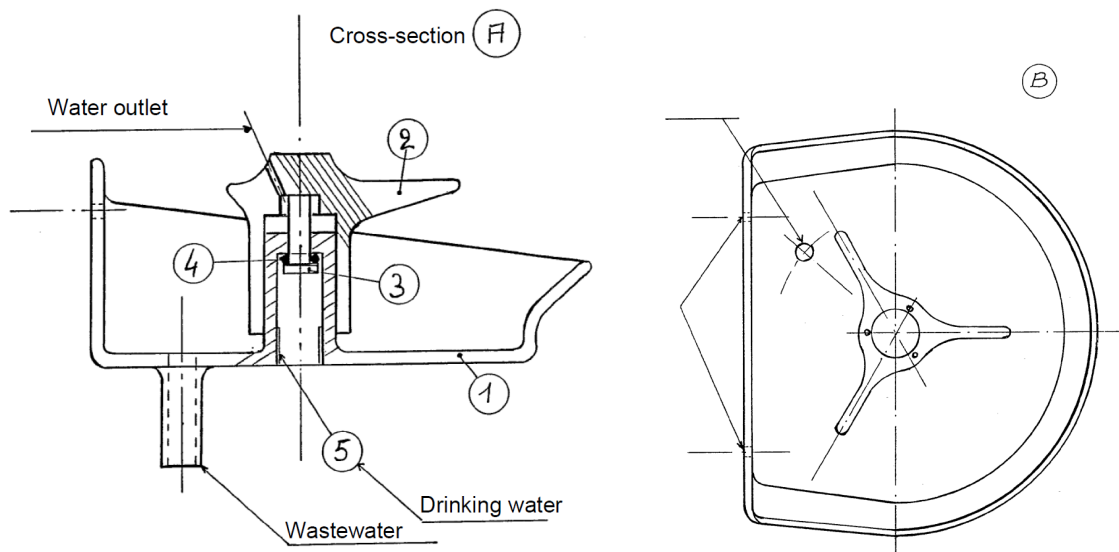


Figure A shows a cross-section of the glass rinser and Figure B shows a top view of the glass rinser. *Id.*

As shown in Figure A, tray 1 includes water inlet 5, a wastewater outlet, and “a flat part for mounting.” *Id.* at 1–3. As shown in Figure B, pusher 2 includes three branches each having a nozzle. When a user presses the edge of a glass against pusher 2, valve 3 actuates, causing water jets to exit from the nozzles. *Id.* at 2.

5. *Hotaling (Ex. 1010)*

Hotaling discloses a drain system for a food preparation machine in

which a trough directs waster from a water collection tray in a rinse station to a drip tray. Ex. 1010, ¶¶ 2, 14, 17.

An automated frozen beverage blending machine including such a drain system is illustrated in Figures 1 and 2, reproduced below.

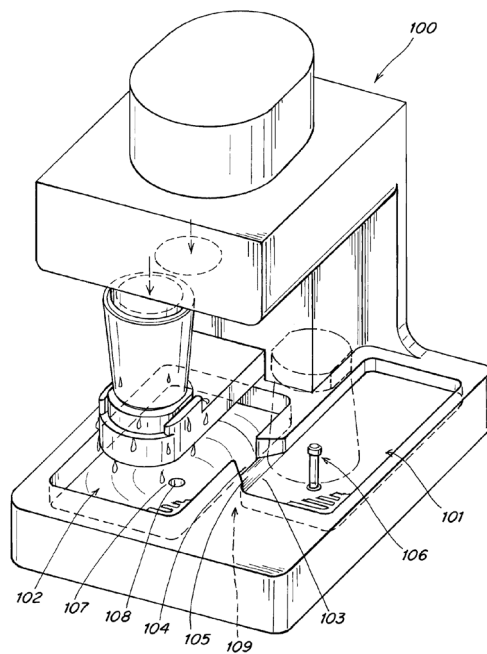


Fig. 1

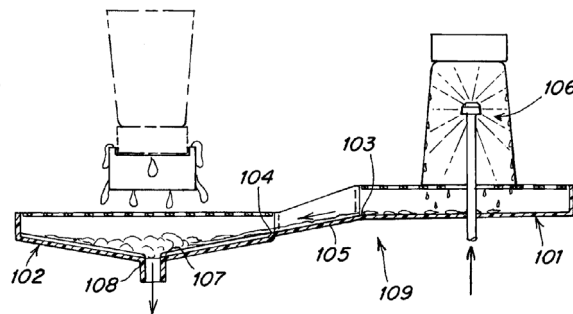


Fig. 2

Figure 1 is a perspective view of beverage preparation machine 100 and Figure 2 is a cross-sectional view of beverage preparation machine 100. *Id.* ¶¶ 5, 6, 18.

As shown in Figures 1 and 2, beverage preparation machine 100 includes rinse station 106 having water collection tray 101 and drip tray 102, which are joined by continuous trough 105 that directs rinse water from rinse station 106 to drain 108 in drip tray 102. *Id.* ¶ 18.

E. The Patentability Challenges

1. Ground 1

The Petitioner asserts that claims 1–5, 10–13, and 15 are unpatentable under 35 U.S.C. § 103 over Van Der Linden in view of Shen Wei. Pet. 5. We focus our discussion on independent claims 1 and 11, which we address separately.

a. Claim 1

Claim 1 requires the recited vessel rinsing apparatus to include a mounting member that extends along a longitudinal axis and is configured to extend through a mounting aperture formed within a mounting deck, and a drain bowl operably coupled to the mounting member.

Van Der Linden's Figure 2 is reproduced below for ease of reference.

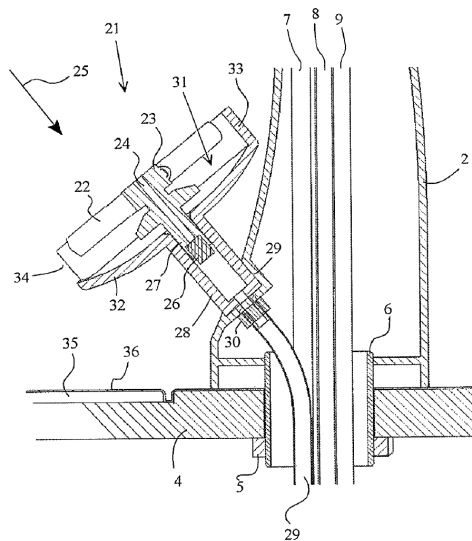


Fig. 2

Figure 2 is a vertical, longitudinal sectional view of a lower part of draft column 2 that forms part of draft tower 1 illustrated in Figure 1. Ex 1006 ¶¶ 26, 31.

The Petitioner asserts that Van Der Linden's washing device 21 is a "vessel rinsing apparatus," and supply line 28, which forms a base for washing device 21, is a "mounting member." Pet. 7–8 (citing Ex. 1006 ¶¶ 31, 32, Fig. 2). The Petitioner asserts that Van Der Linden's supply line/base 28 (mounting member) is configured to extend through recess 29 in column 2 and worktop 4, which, according to the Petitioner, corresponds to a mounting member configured to extend through a mounting aperture formed within a mounting deck. *Id.*

The Petitioner asserts that "[t]o the extent that the mounting member (base 28) of Van Der Linden is not longitudinal, this element is clearly disclosed by Shen Wei." *Id.* at 8.

Shen Wei's Figures 1 and 6 are reproduced below for ease of reference.

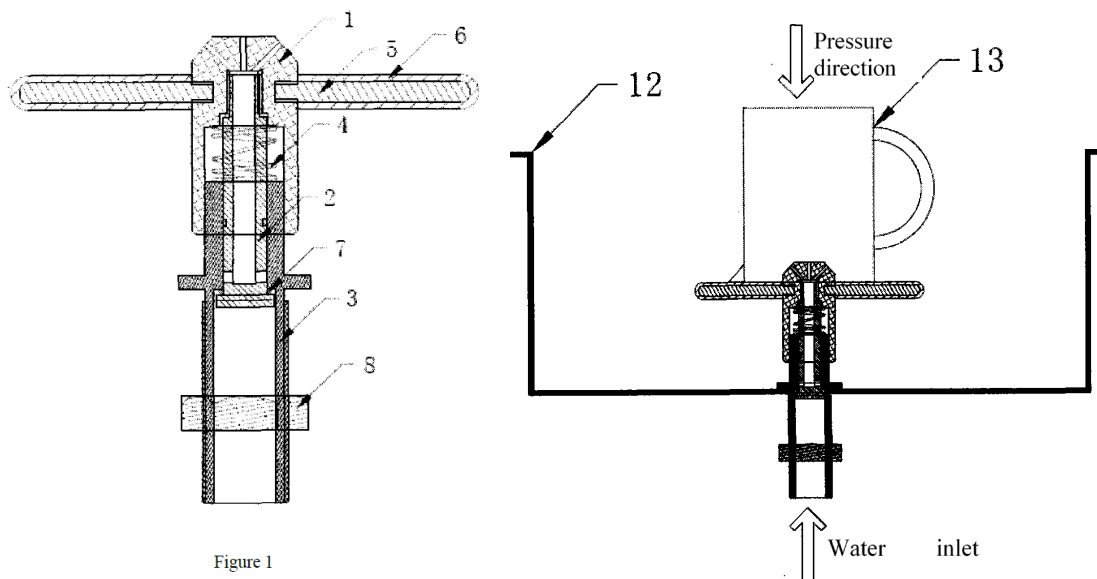


Figure 1 shows a cross-sectional view of a cup-washing machine including body 3 and fastening nut 8. Ex 1007 ¶¶ 12, 20. Figure 6 shows the cup

washing machine of Figure 1 mounted on sink 12. *Id.* ¶¶ 17, 20.

The Petitioner asserts that Shen Wei's body 3 is a "mounting member" that extends along a longitudinal axis, and body 3 is secured to a sink by fastening nut 8. Pet. 8–9 (citing Ex. 1007 ¶ 9, Fig. 1). We note, however, that Figure 6 appears to show otherwise, illustrating nut 8 disposed far below sink 12.

Regardless, the Petitioner argues that, "in the expert opinion of Mr. Cook," it would have been obvious to one of ordinary skill in the art "to modify the vessel rinsing apparatus of Van Der Linden to incorporate the longitudinal mounting member (body 3) and mounting method of Shen Wei" to "minimize the number of components for cost and reliability." Pet. 9 (citing Ex. 1005 ¶ 59). The Petitioner argues that "the aperture mounting method and longitudinal mounting body [of Shen Wei] is the same configuration that deck mounts in residential and commercial faucets and plumbing fixtures have used for hot and cold water valves for many years." *Id.* The Petitioner argues that "a longitudinal mounting member that mounts through apertures like other commonly available fixtures" provides "the known advantages and predictable result" of "increased standalone stability," which would have motivated one of ordinary skill in the art "to make this obvious modification." *Id.*

We are unable to discern how the Petitioner proposes modifying Van Der Linden's vessel rinsing apparatus "to incorporate the longitudinal mounting member (body 3) and mounting method of Shen Wei," however. Neither the Petitioner nor Mr. Cook describes the proposed modifications

with sufficient particularity to allow us to understand the specific nature of the proposed modifications. Pet. 9; Ex. 1005 ¶ 59.

Furthermore, the Petitioner does not provide any objective evidence to support the Petitioner's assertions that modifying Van Der Linden's vessel rinsing apparatus as the Petitioner proposes would minimize the number of components in the apparatus "for cost and reliability," and would provide "increased standalone stability." Pet. 9. Although the Petitioner cites the Cook Declaration when making these assertions, the cited paragraph of the Declaration simply mirrors the Petitioner's conclusory statements without providing any objective, supporting evidence. Ex. 1005 ¶ 59.

In contrast, as discussed above, Van Der Linden explicitly describes advantages associated with the approach Van Der Linden uses to mount its washing device. Specifically, Van Der Linden discloses that mounting the washing device to the base of a kitchen faucet permits a common channel to be used for the tap of the kitchen faucet and for a supply line of the washing device, which advantageously reduces the number of bores in a kitchen worktop required to mount the washing device. Ex. 1006 ¶¶ 17, 39, Fig. 5. Van Der Linden further discloses that positioning the abutment surface defined by the abutment member of the device at "an angle of about 45 degrees with the vertical" directs the washing device "towards the user . . . which is advantageous for ergonomic reasons." *Id.* ¶ 32.

Due to the absence of any objective evidence to support the Petitioner's asserted advantages of modifying Van Der Linden's washing device "to incorporate the longitudinal mounting member (body 3) and

mounting method of Shen Wei,” and Van Der Linden’s disclosure of advantages associated with its mounting approach, the Petitioner’s rationale for the proposed modifications appears to be based on impermissible hindsight. *Velanderv. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003) (“In giving more weight to prior publications than to subsequent conclusory statements by experts, the Board acted well within [its] discretion.”); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”).

Simply because Van Der Linden’s washing device could be modified as the Petitioner proposes,⁷ in the absence of reasoning supported by objective evidence that explains why one of ordinary skill in the art actually would have so modified the device, the Petitioner does not establish that the proposed modification would have been obvious under section 103. This is because “obviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.” *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015).

The Petitioner, therefore, does not provide a sufficient rationale for combining Van Der Linden and Shen Wei’s teachings. Nor does the Petitioner establish sufficiently that a combination of Van Der Linden and

⁷ We reiterate that the Petitioner’s proposed modifications are unclear.

Shen Wei would have suggested a vessel rinsing apparatus having the features recited in claim 1. On the record before us, therefore, the Petitioner does not provide sufficient information to support institution on Ground 1 based on claim 1, and claims 2–5 and 10, which each depend from claim 1.

b. Claim 11

Claim 11 requires the recited vessel rinsing apparatus to include a fluid discharge member and a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall. Claim 11 requires the drain channel to be configured to receive water from the drain bowl and discharge water above and into a sink basin, and requires the drain channel to slope away from the fluid discharge member and the drain bowl to facilitate water drainage into the sink basin.

Van Der Linden's Figure 2 is reproduced below for ease of reference.

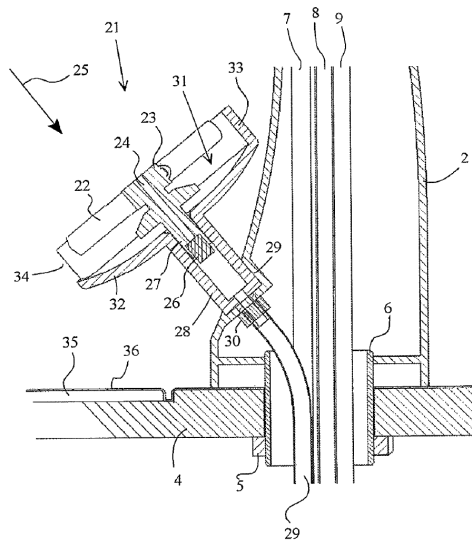


Fig. 2

Figure 2 is a vertical, longitudinal sectional view of a lower part of draft column 2 that forms part of draft tower 1 illustrated in Figure 1. Ex 1006 ¶¶ 26, 31.

The Petitioner asserts that Van Der Linden's cup-shaped container 31 is a "drain bowl" including upright wall 30 and slightly concave bottom 32, which the Petitioner asserts are an "upwardly extending wall" and a "lower wall," respectively. Pet. 23 (citing Ex. 1006 ¶ 31, Fig. 2). The Petitioner asserts that outflow opening 34 is a "drain channel" extending through upright wall 30 ("upwardly extending wall") and configured to receive water from cup-shaped container 31 ("drain bowl") and discharge water above and into drip tray 36 or sink 77 ("sink basin"). *Id.* (citing Ex. 1006 ¶ 31, 35, 39, Fig. 5).

The Petitioner asserts that Van Der Linden's spray nozzle body 23 is a "fluid discharge member." *Id.* at 24 (citing Ex. 1006 ¶ 31). The Petitioner asserts that outflow opening 34 ("drain channel") is sloped away from spray nozzle body 23 ("fluid discharge member") and cup-shaped container 31 ("drain bowl") to facilitate water drainage into drip tray 36 or sink 77 ("sink basin"). *Id.* at 25 (citing Ex. 1006 ¶ 35). The Petitioner indicates that "[i]n this regard, the outflow opening 34 is sloped away from the spray nozzle body 23 and container 31 to facilitate the outflow of water under the force of gravity into the recessed part 35 via holes in the drip tray 36, from where it will be further discharged through the worktop 4., i.e., the sink." *Id.* (citing Ex. 1006 ¶ 39, Figs. 2 and 5).

We begin our analysis by considering the meaning of a drain channel

that “slopes away from” a spray nozzle body, as claim 11 recites. As discussed above, the Petitioner does not expressly interpret any of the claim language—including the phrase “slopes away from” in claim 11—and instead “proposes that all claim terms be given their plain and ordinary meaning.” Pet. 6.

We point out initially that “slope away from (something)” is defined as “to recede from something at a downward angle.” *See., e.g.,* <https://idioms.thefreedictionary.com/sloped+away+from>.

We next look to the '277 patent Specification for guidance as to the meaning of “slopes away from,” as this phrase is used in claim 11. We find no definition, or even description, in the '277 patent of an outflow opening in a drain channel that “slopes away from” a spray nozzle body. In fact, the only mention in the Specification of a drain channel that “slopes away from” a spray nozzle body occurs in claims 5 and 11. Ex. 1001, 7:27–29, 8:1–2. Finding no definition or limiting description of an outflow opening in a drain channel that “slopes away from” a spray nozzle body in the Specification, we interpret “slope away from” according to its plain and ordinary meaning as “to recede from something at a downward angle.” *Phillips*, 415 F.3d at 1313.

Van Der Linden’s outflow opening 34 is simply an opening or gap in upright wall 30. As discussed above and shown in Van Der Linden’s Figure 2, Van Der Linden’s entire washing device 21 is offset from vertical by an angle of about 45 degrees. As a consequence, slightly concave bottom 32 of cup-shaped container 31 recedes from spray nozzle body 23 at a downward

angle (“slopes away from” spray nozzle body 23), but upright wall 30 does not recede from spray nozzle body 23 at a downward angle (“slope away from” spray nozzle body 23); rather, upright wall 30 is parallel to spray nozzle body 23. We, therefore, question whether a gap in upright wall 30—outflow opening 34—“slopes away from” spray nozzle body 23.

On the record before us, the Petitioner’s conclusory assertion that “the outflow opening 34 is sloped away from the spray nozzle body 23 and container 31 to facilitate the outflow of water under the force of gravity” is not sufficient to establish that outflow opening 34 in upright wall 30 “slopes away from” spray nozzle body 23, particularly in view of the Petitioner’s failure to provide an express construction of this phrase as required under 37 C.F.R. § 42.104(b)(3)–(b)(4). Stated another way, the Petitioner does not provide sound technical reasoning supported by objective evidence that explains how and why a gap in Van Der Linden’s upright wall 30 (outflow opening 34) “slopes away from” spray nozzle body 23.

The Petitioner, therefore, does not provide sufficient information to support institution of Ground 1 based on claim 11, and claims 12, 13, and 15, which each depend from claim 11.

2. Ground 2

The Petitioner asserts that claims 1–7, 10–17, 20, 21, 23, and 24 are unpatentable under 35 U.S.C. § 103 over Thomas in view of Van Der Linden. Pet. 5. We focus our discussion on independent claims 1, 11, and 20, which we address together.

Claims 1, 11, and 20 each require the recited vessel rinsing apparatus

to include a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall that is configured to receive water from the drain bowl and discharge water above and into a sink basin.

Thomas' Figures 1 and 2 are reproduced below for ease of reference.

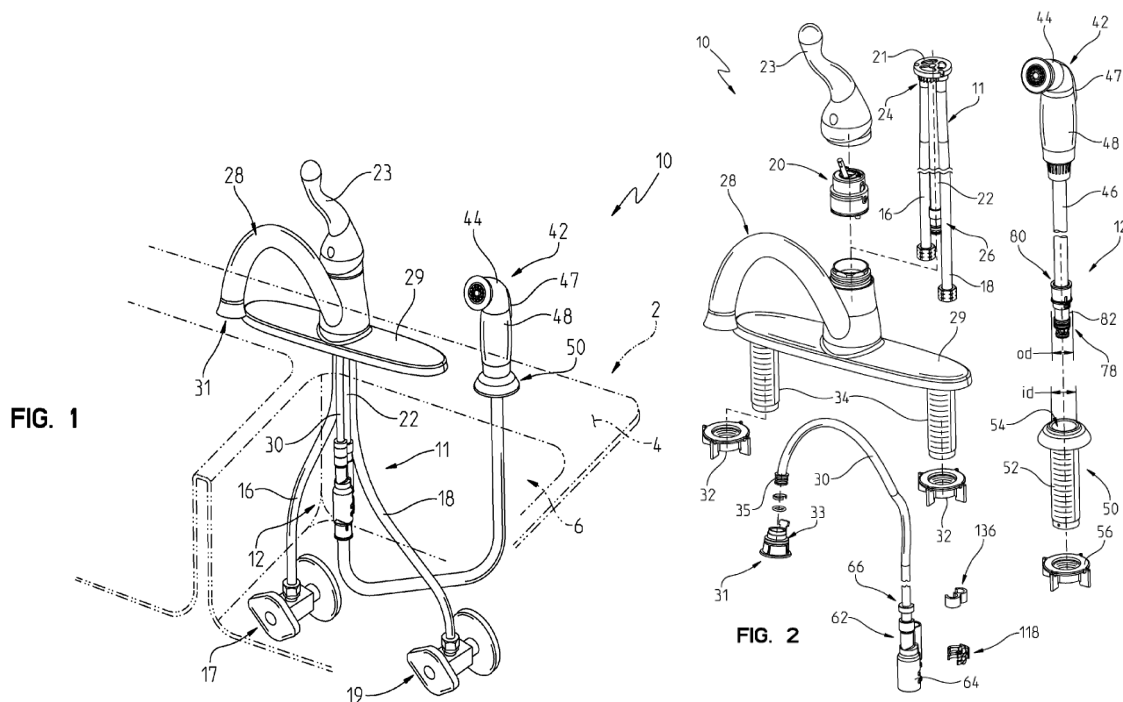


Figure 1 is a perspective view of faucet assembly 10. Ex. 1008 ¶¶ 11, 31.

Figure 2 is an exploded perspective view of faucet assembly 10 of figure 1.

Id. ¶¶ 12, 31.

The Petitioner asserts that Thomas’ side sprayer assembly 42/auxiliary fluid dispenser is a “vessel rinsing apparatus” in view of Thomas’ disclosure that “[w]hile the illustrative auxiliary fluid dispenser is shown as comprising sprayer assembly 42, it should be noted that other fluid delivery devices may be substituted therefore, including a filtered water dispenser.” Pet. 28–29

(citing Ex. 1008 ¶ 33).⁸

The Petitioner asserts that Thomas’ mounting base 50 is a “mounting member” configured to extend through nut 56 (a “mounting aperture”) formed within mounting deck 4. *Id.* at 29 (citing Ex. 1008 ¶ 33, Figs. 1 and 2). The Petitioner asserts that Thomas’ sprayer assembly 42 is a “fluid discharge member” having trigger 47 and body 48 (“central body”) supporting handheld sprayer 44, which includes a plurality of nozzles. *Id.* at 30 (citing Ex. 1008 ¶ 33, Fig. 2).

The Petitioner asserts that Van Der Linden’s cup-shaped container 31 is a “drain bowl” including upright wall 30 and slightly concave bottom 32, which the Petitioner asserts are an “upwardly extending wall” and a “lower wall,” respectively. *Id.* at 33 (citing Ex. 1006 ¶ 33, Fig. 2). The Petitioner asserts that outflow opening 34 is a “drain channel” extending through upright wall 30 (“upwardly extending wall”) and configured to receive water from cup-shaped container 31 (“drain bowl”) and discharge water above and into drip tray 36 or sink 77 (“sink basin”). *Id.* (citing Ex. 1006 ¶¶ 33, 35, 39, Fig. 5).

The Petitioner asserts that “[i]n the expert opinion of Mr. Cook, it would have been obvious to one having ordinary skill in the art . . . to modify the vessel rinsing apparatus of Thomas to incorporate the cup shaped

⁸ In this Decision, we cite the portions of the Petition directed to claim 1 in the Petitioner’s discussion of Ground 2, noting that the Petitioner provides substantially the same assertions for the corresponding limitations of claims 11 and 20 in the discussion Ground 2, which we do not cite.

container of Van Der Linden.” *Id.* at 33–34 (citing Ex. 1005 ¶ 97).

Elaborating on the Petitioner’s assertions, Mr. Cook opines that it would have been obvious to one having ordinary skill in the art to modify Thomas’ vessel rinsing apparatus “to incorporate the cup shaped container of Van Der Linden” because “Thomas explicitly teaches substituting other known fluid delivery devices for the auxiliary fluid dispenser shown,” and, “[i]n my opinion, any drain area that does not incorporate side walls (i.e. not bowl shaped) would allow uncontrolled water flow and be unusable for this specific application.” Ex. 1005 ¶ 99. Mr. Clark indicates that “[i]ncorporating the drain bowl with the mounting member is an obvious method to reduce part count, complexity and cost.” *Id.* Mr. Clark further opines that “[g]iven the known and predictable vessel rinsing advantages of having a cup shaped container for improved cleaning of the inside of glasses, improved drainage, and reduc[tion] of splashing, one having ordinary skill in the art would have been motivated to make this obvious modification.” *Id.*

We are unable to discern the nature of the Petitioner’s proposed modifications of Thomas’ vessel rinsing apparatus, however. Both the Petitioner and Mr. Clark discuss modifying Thomas’ vessel rinsing apparatus “to incorporate the cup shaped container of Van Der Linden.” Pet. at 33–34; Ex. 1005 ¶ 97. Mr. Clark, however, also discusses “[i]ncorporating the drain bowl with the mounting member” and “having a

⁹ The Clark Declaration provides the same opinions when discussing the corresponding limitations of claims 11 and 20 for Ground 2. Ex. 1005 ¶¶ 109, 125.

cup shaped container for improved cleaning of the inside of glasses.”

Ex. 1005 ¶ 97. It is unclear whether the Petitioner proposes incorporating only Van Der Linden’s cup-shaped container 31 into Thomas’ sprayer assembly/auxiliary fluid dispenser 42 or, perhaps, whether the Petitioner proposes substituting the entirety of Van Der Linden’s washing device 21, 78 for Thomas’ sprayer assembly/auxiliary fluid dispenser 42. This lack of clarity arises because Van Der Linden’s cup-shaped container 31 serves as a catch basin for wash water and does not itself clean the inside of glasses, but Mr. Clark mentions “improved cleaning of the inside of glasses” as a reason for the proposed modifications.

Either way, the Petitioner does not explain how Thomas’ modified device would meet the limitations of claims 1, 11, and 20. Rather, the Petitioner discusses how each of Thomas and Van Der Linden individually meet certain limitations of claims 1, 11, and 20, but does not articulate how Thomas’ modified device would meet the claim limitations, which results from the lack of a clear description of the specific proposed modifications of Thomas’ device in view of Van Der Linden.

Furthermore, Mr. Clark does not provide any objective evidence to support his assertions that modifying Thomas’ device as the Petitioner proposes would reduce the part count, complexity, and cost of Thomas’ device. Nor does Mr. Clark provide any objective evidence to substantiate the asserted “known and predictable vessel rinsing advantages of having a cup shaped container for improved cleaning of the inside of glasses, improved drainage, and reduction of splashing.” Absent such evidence, the

asserted reasons for the proposed modifications appear to be based on impermissible hindsight. *KSR*, 550 U.S. at 418 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”).

Simply because Thomas’ device could be modified as the Petitioner proposes—which, we reiterate, is unclear on the record before us—in the absence of reasoning supported by objective evidence that explains why one of ordinary skill in the art actually would have so modified the device, the Petitioner does not establish that the proposed modification would have been obvious under section 103. This is because “obviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.” *Belden*, 805 F.3d at 1073.

The Petitioner, therefore, does not provide a sufficient rationale for combining Thomas’ and Van Der Linden’s teachings. Nor does the Petitioner establish sufficiently that a combination of Thomas’ and Van Der Linden’s teachings would have suggested a vessel rinsing apparatus having the features recited in independent claims 1, 11, and 20. On the record before us, therefore, the Petitioner does not provide sufficient information to support institution on Ground 2 because the Petitioner does not establish a reasonable likelihood of prevailing in its challenge on this ground to the patentability at least one of claims 1–7, 10–17, 20, 21, 23, 24.

3. *Ground 3*

The Petitioner asserts that claims 1, 2, 5–7, 10–14, 16, 17, 20, 21, 23, and 24 are unpatentable under 35 U.S.C. § 103 over Thomas in view of Boursier and Hotaling. Pet. 5. We focus our discussion on independent claims 1, 11, and 20, which we address together.

As discussed above, claims 1, 11, and 20 each require the recited vessel rinsing apparatus to include a drain bowl including a lower wall, an upwardly extending wall operably coupled to the lower wall, and a drain channel extending through the upwardly extending wall that is configured to receive water from the drain bowl and discharge water above and into a sink basin.

Similar to Ground 2, the Petitioner asserts that Thomas' side sprayer assembly 42/auxiliary fluid dispenser is a "vessel rinsing apparatus." Pet. 54 (citing Ex. 1008 ¶¶ 2, 33, Fig. 2).¹⁰ The Petitioner asserts that Thomas' mounting base 50 is a "mounting member" configured to extend through nut 56 (a "mounting aperture") formed within mounting deck 4. *Id.* (citing Ex. 1008 ¶ 33, Figs. 1 and 2). The Petitioner asserts that Thomas' sprayer assembly 42 is a "fluid discharge member" having trigger 47 and body 48 ("central body") supporting handheld sprayer 44, which includes a plurality of nozzles. *Id.* (citing Ex. 1008 ¶ 33, Fig. 2).

¹⁰ In this Decision, we cite the portions of the Petition directed to claim 1 in the Petitioner's discussion of Ground 3, noting that the Petitioner provides substantially the same assertions for the corresponding limitations of claims 11 and 20 in the discussion Ground 3, which we do not cite.

Boursier's Figure A is reproduced below for ease of reference.

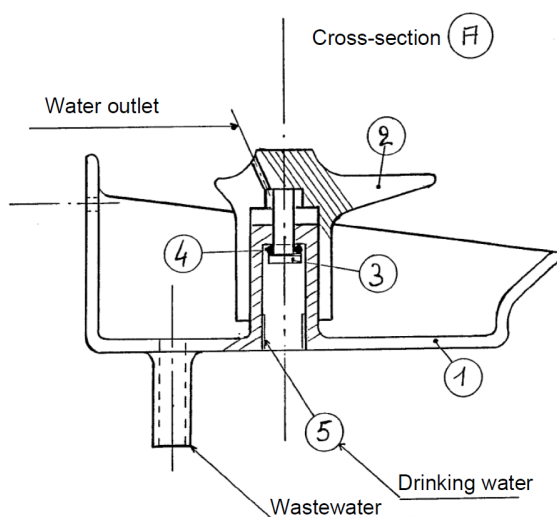


Figure A shows a cross-section of a glass rinser assembly. Ex. 1009, 1.

The Petitioner asserts that Boursier's tray/reservoir 1 is a "drain bowl" including a lower wall and an upwardly extending wall coupled to the lower wall, and Boursier's wastewater outlet is a "drain channel" configured to receive water from the drain bowl and discharge water. Pet. 55 (citing Ex. 1009, 1). The Petitioner indicates that "Boursier does not explicitly disclose mounting the tray/reservoir 1 to a mounting member," although "Boursier does teach that the tray 1 is 'itself fastened to a wall or other partition by means of two screws.'" *Id.* at 56 (citing Ex. 1009, 1).

The Petitioner indicates that "[i]n the opinion of Mr. Cook, it would have been obvious to one having ordinary skill in the art to combine the mounting base 50 of Thomas with the tray/reservoir 1 of Boursier to provide a mounting method for deck installation with minimal and standard parts." *Id.* (citing Ex. 1005 ¶ 142). The cited paragraph of the Cook Declaration repeats this statement *verbatim*, without any elaboration.

The Petitioner indicates that “Boursier further does not explicitly disclose a drain channel extending through an upwardly extending wall.” *Id.*

Hotaling’s Figure 2 is reproduced below for reference.

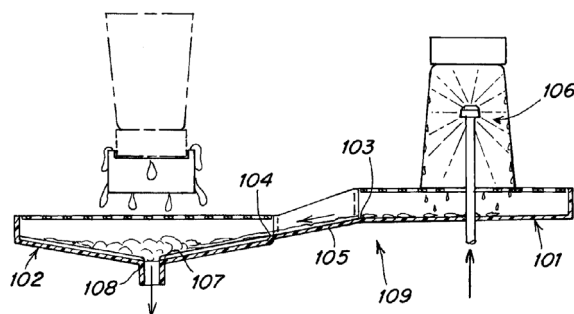


Fig. 2

Figure 2 is a cross-sectional view of a beverage preparation machine 100.

Ex. 1010 ¶¶ 5, 6, 18.

The Petitioner asserts that Hotaling’s trough 105 is a “drain channel” extending through an upwardly extending wall of water collection tray 101, which the Petitioner asserts is a “drain bowl.” Pet. 57. The Petitioner quotes Hotaling’s statement that “the rinse station water collection tray, 101, is connected to a high point, 104, in the drip tray, 102, by a continuous trough, 105, through which water is conducted from the rinse station, 106, to the drip tray, 102,” and the Petitioner asserts that Hotaling’s “drip tray 102 is analogous to a sink basin.” *Id.* (citing Ex. 1010 ¶ 18, Figs. 2 and 3).

The Petitioner asserts that “[i]n the expert opinion of Mr. Cook, it would have been obvious to one having ordinary skill in the art to combine the drain channel and upwardly extending wall of Boursier with the drain channel extending through the upwardly extending wall of Hotaling to predictably improve water drainage into a sink basin.” *Id.* (citing Ex. 1005

¶ 144). The Petitioner further asserts that “[i]n Mr. Cook’s opinion, this is an obvious adaptation of the wall/partition mount of Boursier and the appliance mount of Hotaling to the deck mount feature of this design” because “[t]he bowl is mounted above the sink basin and drains with the aid of gravity and the water is directed by the simplest and most obvious change in the geometry to direct the water properly.” *Id.* Again, the cited paragraph in the Cook Declaration simply repeats this statement *verbatim*, without any elaboration. Ex. 1005 ¶ 144.

Similar to Ground 2 discussed above, however, we are unable to discern the nature of the Petitioner’s proposed modifications of Thomas’ vessel rinsing apparatus. Although the Petitioner and Mr. Clark propose combining Thomas’ mounting base 50 with Boursier’s tray/reservoir 1 “to provide a mounting method for deck installation with minimal and standard parts,” the specific nature of this combination is unclear. Thomas’ mounting base 50 is secured to an aperture in mounting deck 4 via nut 56, which engages mounting post 52; consequently, Thomas’ faucet assembly 10 already employs a “mounting method for deck installation.”

Furthermore, it appears that the proposed combination would require incorporation of additional parts into Thomas’ apparatus, but we find no evidence on the record before us establishing that any such parts would be “standard.” Neither the Petitioner nor Mr. Clark explains how combining Boursier’s tray/reservoir 1 with Thomas’ mounting base 50 would involve use of “minimal and standard parts.” Nor do the Petitioner and Mr. Clark provide any evidence to support this assertion.

Moreover, although the Petitioner and Mr. Clark assert that it would have been obvious to combine Boursier's drain channel and upwardly extending wall with Hotaling's drain channel extending through an upwardly extending wall, we, again, are unable to ascertain how this proposed combination relates to Thomas' device. More specifically, the Petitioner discusses Boursier and Hotaling individually, and then proposes the above combination. But the Petitioner does not explain how Thomas' device would be modified based on this proposed combination of Boursier and Hotaling. Rather, similar to Ground 2, the Petitioner discusses how each of Thomas, Boursier, and Hotaling individually meet certain limitations of claims 1, 11, and 20, but the Petitioner does not articulate how Thomas' modified device would meet the claim limitations, resulting from the lack of a clear description of the specific proposed modifications of Thomas' device in view of Boursier and Hotaling.

Finally, Mr. Clark does not provide any objective evidence to support his assertions that modifying Thomas' device in view of the proposed combination of Boursier and Hotaling would predictably improve water drainage into a sink basin. Ex. 1005 ¶ 144. Nor does Mr. Clark provide any objective evidence to substantiate the asserted obviousness of adapting Boursier's wall/partition mount and Hotaling's appliance mount "to the deck mount feature of this design." *Id.* Absent such evidence, the asserted reasons for the proposed modifications appear to be based on impermissible hindsight. *KSR*, 550 U.S. at 418.

Simply because Thomas' device could be modified as the Petitioner

proposes, in the absence of reasoning supported by objective evidence that explains why one of ordinary skill in the art actually would have so modified the device, the Petitioner does not establish that the proposed modification would have been obvious under section 103. This is because “obviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.” *Belden*, 805 F.3d at 1073.

The Petitioner, therefore, does not provide a sufficient rationale for combining Thomas’, Boursier’s, and Hotaling’s teachings. Nor does the Petitioner establish sufficiently that a combination of Thomas’, Boursier’s, and Hotaling’s teachings would have suggested a vessel rinsing apparatus having the features recited in independent claims 1, 11, and 20. On the record before us, therefore, the Petitioner does not provide sufficient information to support institution on Ground 3.

F. Discretion to Deny Institution Under 35 U.S.C. § 325(d)

The Patent Owner requests that we exercise our discretion to deny institution under 35 U.S.C. § 325(d). Prelim. Resp. 11–34. In view of our determination that the Petitioner does not meet the threshold for instituting review on the merits, we need not address whether to exercise our discretion to deny institution under § 325(d).

V. ORDER

It is ORDERED that the Petition is *denied*, and no trial is instituted.

IPR2023-01332
Patent 11,473,277 B2

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